

This WRAS is Currently Under Revision

Sapello Watershed Restoration Action Strategy (WRAS)

The Sapello Watershed is a sub-basin of the Mora River system, which forms part of the Canadian River Basin. The Manuelitas Creek is the main tributary to the Sapello River. The headwaters begin at an elevation of 10,000 feet in the Santa Fe National Forest that includes the Left-hand Sapello River and its junction with Johns Canyon Creek to form the Sapello River and then dropping 6,200 feet just above the village of Sapello at the junction of the Sapello River and the Manuelitas Creek. At the bottom of the watershed is a broad valley floor that begins to climb in elevation through more and more convergence of steeper mountainsides and a narrowing of the valley.

The forested area was affected severely by a catastrophic fire some 95 years ago and was heavily logged prior to that. From these events, most of the forest is single age stand with many areas of dog-haired conditions, (highly populated stands of trees growing close together). Twenty percent of the watershed is greater than 60% slope with approximately 30 inches of annual rainfall. This has left much of the unattended area in danger of wildfires such as occurred in 2000, “The Manuelitas Fire”

The two mainstream systems, Sapello and Manuelitas, are dotted with beaver activity today. Dams can be found throughout the lengths of them. Beavers have been present throughout the developmental process of these valleys. The dams created overflow zones for riparian sediment deposits that enhanced the valley floor, contributing to the present day topography.

From the 2000 census, we know that San Miguel County’s population is increasing in the rural areas while city growth declined. More homes are being constructed and with them come new roads and driveways along with septic systems that have the potential to contribute sediment and nutrients to the stream systems.

The recent drought has resulted in low water flow in streams within the watershed. In addition, the catastrophic fire of 2000 has severely affected the water quality in the Sapello River from Manuelitas Creek to its headwaters. As a result of vegetation loss, large amount of ash and soils highly vulnerable to erosion, severe runoff and turbidity have become major problems. This watershed condition has caused increased siltation in the river and placed fisheries in danger and increased erosion on the land. Data to support these problems include assessments on the burn area including the watershed by NM State Forestry and USDA-Natural Resources Conservation Service.

*A new irrigation diversion dam was completed in 2002 that will affect the in-stream flow of Manuelitas Creek. The previous diversion and acequia (irrigation ditch) had been non-functional for several years causing landowners to irrigate on limited bases using a pump and sprinkler system.

Tierra y Montes and its partners (other agencies and private landowners) have worked together during the last three years in developing watershed plans to address watershed,

forest and riparian health. Erosion issues, both bank and surface erosion, are the main focus. The objectives are to educate and incorporate landowners with project implementation.

The following is a list of projects in various stages of implementation that have been completed with the help of partners within the last few years:

- Tierra y Montes Soil and Water Conservation District has received an EPA 319 grant and will begin work at treating areas within the watershed. This project will address the problems by developing and implementing Best Management Practices including riparian and fisheries habitat restoration through bioengineering and fencing; education outreach on watershed management; grass seeding and seedling plantings will also be completed. Fencing to reduce grazing and browsing of critical acres on private land will be implemented and diversion structures to control runoff and filter sediment from floodwaters before they reach the river will be installed. The district has provided a comprehensive educational program (to increase the knowledge of a healthy watershed and water quality we provide different educational programs for students of all ages throughout the Pecos, Las Vegas and Sapello schools), and an informational newsletter (providing information on various types of projects that have been implemented to assist with problems within the watershed and how the public can participate), for the past 11 years.
- New Mexico State Forestry has assisted Tierra y Montes with the Wildland Urban Interface Project, which is geared towards private landowners to assist with defensible space thinning around their homes. NM State Foresters go out and assess the landowner's home and the area surrounding it and prepare a practice plan for thinning. Once the plan is completed it is up to the landowner to complete the work him or herself or to hire a contractor. The landowner is responsible for 30% cost-share. It is our hope that with this type of assistance we may be able to reduce the loss of homes in the act of wildfires and the quantity and quality of water is increased. This project has been implemented and various landowners have taken advantage of it.
- USDA Natural Resources Conservation Service prepared assessments used to assist the landowners within that fire area to rehabilitate their land and reduce erosion. Site visits are made and a plan is prepared for implementation of erosion control structures, reseeding and other methods they feel will assist the landowner to reduce valuable soil loss. With this assistance the landowner is provided with methods to control erosion and the sediment is not swept into the river.
- Private landowner projects, such as those on the Blagg and Rodgers property, who have instigated projects on their own.

After the forest fire of 2000, many affected landowners took the initiative and implemented projects on their own. They installed hay bales to control the runoff on the

burn area and various other erosion control structures. Many have planted seedlings and reseeded burned areas. Other landowners have thinned some of their property and continue to use protective measures against wildfires.

Future concerns on this watershed include severe erosion and with the continued drought there is also a threat of new fires. With the past fire there have been many areas that are without forest canopy cover and the reseeded areas lack enough vegetative cover to withstand the erosive affects from the monsoon rains that occur during our summer months. These particular areas will require attention to continue their rehabilitation.

Wish List of the Sapello Watershed Projects

These components of the WRAS were developed during the last three years through intensive and extensive planning efforts. Completion of these projects is expected with 319 funds, NRCS federal programs and technical assistance, Mill Levy monies, and landowner out-of-pocket funds.

➤ Land Use

Thinning:

Jane Lumstead - defensible space thinning on her property.

Mary Padilla - thinning of her property and installing a fire line for protection from future devastating forest fires.

USDA Forest Service - thinning and prescribed burning on public land.

Erosion control of watershed:

Improve ground cover and forest health through gully work; check dams and simple rock structures. Agricultural management improvements to allow healing of riparian areas. Some practices would involve grazing management improvements such as laying aside or resting land for period of time and enhancing groundcover and allowing organic material to build. These practices would occur throughout the watershed.

Mary Ann Pena - reseeding to improve gully erosion, which would improve ground cover.

Don St. John - rock & brush dams, swales, brush bundles, terrace work and reseeding of hillside to reduce erosion. He also is active in rainwater harvesting methods.

Carlos Vigil - install vanes, (erosion control methods within river) to allow eroded riverbank to heal itself.

Jeff Mills - reseed areas to slow down runoff.

James Chadburn – install willow fascines along the riverbank to control erosion problems.

USDA Forest Service - installing cross fences and pasture fences for better livestock grazing management and prevention of further land erosion. Also of great interest, is reseeded of some badly eroded areas.

➤ **Erosion Control of Riverbanks**

Improving large woody vegetation planting cottonwood, black willow, and alders. Providing wire cages around plantings for protection from beavers. Installing riparian fences to limit access to water for livestock reducing erosion along riverbanks. Increasing shade from plantings to control water temperature and providing rock placement to oxygenate the water and create pools for fish.

Riparian plantings

David Blagg - planting of 500-14 to 16 foot cottonwood poles. He hopes to purchase a pump for watering these poles for a larger success rate on plantings.

Fred Espinoza - cottonwood plantings to reduce riverbank erosion.

Jeff Mills - planting willow and cottonwoods along the streambank.

USDA Forest Service - meadow and grassland maintenance to reinforce the vegetation preventing further erosion.

Riparian fencing

David Blagg - installing a riparian fence on the north side of the river to allow riverbank restoration.

Carlos Vigil - fence installation for riparian protection.

Angie Salas - install a fence to protect the riparian area from cattle overgrazing.

On USDA Forest Service - setting up riparian fencing for better management along riparian areas. Cross fencing for better grazing.

River restoration

Juan Mascarenas - assistance with sediment and ash removal in pond, which is filled by river runoff.

Shirley Nelson - assistance to clean up streambed that is covered with sediment and ash.

Tino Gallegos - assistance with sediment filled pond. As a result of the pond not holding water, eroding of pond bank is taking place and will eventually drain into river.

USDA Forest Service - improving the fishery habitat by providing pole plantings for shade and creating better pools for fish.

➤ **Public Outreach/Education**

Field trips:

For both school children and landowners to provide visual and hands-on training on riparian restoration, erosion control and proper grazing management.

Sid Goodloe – training on ranching, thinning, grazing rotation

Bill Zeedyke – training on streambank restoration methods

Newsletters:

Will be provided to all landowners within the watershed, and throughout San Miguel County, to inform on projects being implemented and educational opportunities on watershed issues.

School outdoor classroom program:

To allow students to understand and participate in a restoration project in place on Blagg (and other private landowners) property.

Long-term sustainability, which includes:

- Healthy and diverse forest that produces high quality and quantity water along with forest products.
- Increase habitat and wildlife diversity for hunting and viewing
- To decrease soil loss due to human activity
- To decrease the fire hazard through systematic thinning.

Monitoring and Evaluation Needs:

- Do several river stream cross sections to determine stream type
- Set up monitoring stations at these above sites to do:
 - TMDL's (that are being developed)
 - Fecal, coliform, temperature, turbidity, nitrates
 - Fire impact
 - Water quantity

- Photo documentation of “before & after” implementation of all projects and events.

* Prioritization of the projects is based on the interest and involvement of the landowners.